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|---------------------------------|----------------------------------|----------------------|-------------------------|------------------|
| 10/633,335 | 08/01/2003 | Zvi Yaniv | 12179-P116US | 4189 |
| 29444 7. | 590 05/09/2006 | | EXAMINER | |
| WINSTEAD SECHREST & MINICK P.C. | | | TSOY, ELENA | |
| | PO BOX 50784 DALLAS, TX 75201 | | ART UNIT | PAPER NUMBER |
| | | | 1762 | |
| | | | DATE MAILED: 05/09/2006 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) | | | |
|--|--------------------------|--|--|--|--|
| Office Action Surrence | 10/633,335 | YANIV, ZVI | | | |
| Office Action Summary | Examiner | Art Unit | | | |
| | Elena Tsoy | 1762 | | | |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply | | | | | |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailling date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). Status | | | | | |
| 1) Responsive to communication(s) filed on 24 | April 2006 . | | | | |
| | his action is non-final. | | | | |
| 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. Disposition of Claims | | | | | |
| · <u> </u> | annlication | | | | |
| 4) Claim(s) 1-15 and 21-30 is/are pending in the application. | | | | | |
| 4a) Of the above claim(s) is/are withdrawn from consideration. | | | | | |
| 5) Claim(s) is/are allowed. | | | | | |
| 6) Claim(s) 1-15 and 21-30 is/are rejected. | | | | | |
| 7) Claim(s) is/are objected to. | | | | | |
| 8) Claim(s) are subject to restriction and/or election requirement. Application Papers | | | | | |
| 9) The specification is objected to by the Examiner. | | | | | |
| 10) The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner. | | | | | |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). | | | | | |
| 11) ☐ The proposed drawing correction filed on is: a) ☐ approved b) ☐ disapproved by the Examiner. | | | | | |
| If approved, corrected drawings are required in reply to this Office action. | | | | | |
| 12) The oath or declaration is objected to by the Examiner. | | | | | |
| Priority under 35 U.S.C. §§ 119 and 120 | | | | | |
| 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). | | | | | |
| a) ☐ All b) ☐ Some * c) ☐ None of: | | | | | |
| 1. Certified copies of the priority documents have been received. | | | | | |
| 2. Certified copies of the priority documents have been received in Application No | | | | | |
| 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. | | | | | |
| | · | | | | |
| 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) ☐ The translation of the foreign language provisional application has been received. | | | | | |
| 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121. | | | | | |
| Attachment(s) | | | | | |
| Notice of References Cited (PTO-892) Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _ | 5) Notice of Informal | ry (PTO-413) Paper No(s) Patent Application (PTO-152) | | | |
| S. Patent and Trademark Office TOL-326 (Rev. 04-01) Office A | ction Summary | Part of Paper No. 0506 | | | |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/24/2006 has been entered.

Response to Amendment

Amendment filed on 4/24/2006 has been entered. Claims 1-15, and 21-30 are pending in the application.

Claim Rejections - 35 USC § 112

- The following is a quotation of the second paragraph of 35 U.S.C. 112:
 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 2. Claims 1-15, and 21-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Physisorbing a chemical species <u>as</u> a chemical adsorbate renders the claim indefinite because "chemical adsorbate" means that an adsorbate is **chemically** adsorbed.

The specification as filed discloses that in some embodiments, the nanoparticles are chemically functionalized prior to their use in chemical sensing. Such functionalization broadens the range in which the nanoparticles' photoluminescence properties can be tuned, and it can vary the efficiency with which chemical species can be adsorbed onto the nanoparticle surface. See

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P15. **Adsorption** includes, but is not limited to, physisorption, **chemisorption**, and combinations thereof (See P21). For this reason claimed "chemical adsorbate" was interpreted by the Examiner as an adsorbate that is **chemically** adsorbed. Since molecules should be first *physically* adsorbed before chemical interaction, claimed *physisorption* of the chemical species was interpreted for examining purposes as a first step in a process of forming a *chemically* bonded adsorbate.

It is held that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. In re Cortright, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

 (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 4. Rejection of claims 1-5, 8, 10, 11, 14, 21, 22, 25, 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Weiss et al (US 5990479) has been withdrawn due to amendment.

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5. Rejection of claims 1-5, 8, 12, 15, 21, 22, 27, 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Daniels et al (US 20020004246) has been withdrawn due to amendment.

- 6. Rejection of claims 1-3, 5, 6, 8, 10, 11, 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Chee et al (US 6,544,732) has been withdrawn due to amendment.
- 7. Rejection of claims 1-3, 5, 6, 8, 10, 11, 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Barbera-Guillem et al (US 6,2617,79) has been withdrawn due to amendment.
- 8. Claims 1, 3, 5, 8, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Dimitrov (US 20030013091).

The Examiner Note: in a process of forming a *chemical* adsorbate, *physisorption* of a chemical species onto the surface of nanoparticles is a first necessary step before being *chemically* adsorbed onto the surface of the nanoparticles.

Dimitrov discloses a process comprising: a) exposing a target analyte (claimed chemical species) to a label (See P10, P27, P28, P31, P32) such as CdSe nanoparticles e.g. quantum dots of 1-5 nm (See P38, P39-40) such that the target analyte binds, attaches (adsorbs) to the nanoparticles as a chemical adsorbate (See P10, P12); b) irradiating the nanoparticles comprising the chemical adsorbate with radiation; c) detecting altered photoluminescence properties of the nanoparticles comprising the chemical adsorbate; and d) analyzing the altered photoluminescence properties by comparing to one or more pre-defined altered photoluminescence properties, to provide for an identifying of the chemical species (See P34, P38-40). The analyte can be attached to the label in solution or solid-phase, including, for example, to a solid surface such as a chip, microarray or bead (See P13). Measurement can be quantitative or qualitative (See P13).

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Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 10. Claims 1-5, 8, 10, 11, 14, 21, 22, 25, 26, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al (US 5,990,479) in view of Dimitrov or Vossmeyer (US 6,458,327).

Weiss et al are applied here for the same reasons as set forth in paragraph 4 of the Office Action mailed on 2/09/2006. Weiss et al further teach that the adherence of a detectable substance to a nanocrystal may comprise **any** sort of bond, including, but not limited to, covalent, ionic, hydrogen bonding, Van der Waals' forces (claimed physisorption), or mechanical bonding (claimed physisorption) (See column 5, lines 41-46).

Weiss et al do not expressly teach that an exposure of the detectable substance to the nanocrystal is carried out in a solid or gas phase (Claims 1, 21).

Dimitrov teaches that an analyte (a detectable substance) can be attached to a nanoparticle, e.g. quantum dot, in a <u>solution</u> or <u>solid-phase</u>, including, for example, to a solid surface such as a chip, microarray or bead (See P13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out an exposure of a detectable substance to a nanocrystal in Weiss et al in a solid phase since Weiss et al do not limit the exposure to a particular phase and Dimitrov teaches that an analyte (a detectable substance) can be attached to a nanoparticle in a solution or solid-phase.

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Vossmeyer teaches that adsorption of an analyte (a detectable substance) to a nanoparticle of 20 nm or less (See column 3, lines 36-40) may be carried out in a <u>liquid</u> or <u>gasphase</u> (See Abstract; column 5, lines 34-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out an exposure of a detectable substance to a nanocrystal in Weiss et al in a gas phase since Weiss et al do not limit the exposure to a particular phase and Vossmeyer teaches that adsorption of an analyte (a detectable substance) to a nanoparticle of 20 nm or less (See column 3, lines 36-40) may be carried out in a liquid or gas-phase.

11. Claims 1-5, 8, 12, 15, 21, 22, 27, 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniels et al (US 20020004246) in view of Dimitrov or Vossmeyer.

Daniels et al are applied here for the same reasons as set forth in paragraph 5 of the Office Action mailed on 2/09/2006. Daniels et al teach that binding of a detectable substance to a nanocrystal is *typically* non-covalent (i.e. could be covalent or non-covalent) (See P88). Daniels et al further teach that exposure can be carried out in a **liquid** media (See P259). Daniels et al do not expressly teach that an exposure of the detectable substance to the nanocrystal is carried out in a solid or gas phase (Claims 1, 21).

Dimitrov teaches that an analyte (a detectable substance) can be attached to a nanoparticle, e.g. quantum dot, in a <u>solution</u> or <u>solid-phase</u>, including, for example, to a solid surface such as a chip, microarray or bead (See P13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out an exposure of a detectable substance to a nanocrystal in Daniels et al in a solid phase since Daniels et al do not limit the exposure to a particular phase and Dimitrov

teaches that an analyte (a detectable substance) can be attached to a nanoparticle in a solution or solid-phase.

Vossmeyer teaches that adsorption of an analyte (a detectable substance) to a nanoparticle of 20 nm or less (See column 3, lines 36-40) may be carried out in a <u>liquid</u> or <u>gasphase</u> (See Abstract; column 5, lines 34-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out an exposure of a detectable substance to a nanocrystal in Daniels et al in a gas phase since Weiss et al do not limit the exposure to a particular phase and Vossmeyer teaches that adsorption of an analyte (a detectable substance) to a nanoparticle of 20 nm or less (See column 3, lines 36-40) may be carried out in a liquid or gas-phase.

12. Claims 1-3, 5, 6, 8, 10, 11, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chee et al (US 6,544,732) in view of Dimitrov or Vossmeyer.

Chee et al are applied here for the same reasons as set forth in paragraph 6 of the Office Action mailed on 2/09/2006. Chee et al further teach that exposure can be carried out in a **liquid** media (See column 25, lines 36-38). Chee et al do not expressly teach that an exposure of the detectable substance to the nanocrystal is carried out in a solid or gas phase (Claims 1, 21).

Dimitrov teaches that an analyte (a detectable substance) can be attached to a nanoparticle, e.g. quantum dot, in a <u>solution</u> or <u>solid-phase</u>, including, for example, to a solid surface such as a chip, microarray or bead (See P13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out an exposure of a detectable substance to a nanocrystal in Chee et al in a solid phase since Chee et al do not limit the exposure to a particular phase and Dimitrov

teaches that an analyte (a detectable substance) can be attached to a nanoparticle in a solution or solid-phase.

Vossmeyer teaches that adsorption of an analyte (a detectable substance) to a nanoparticle of 20 nm or less (See column 3, lines 36-40) may be carried out in a <u>liquid</u> or <u>gasphase</u> (See Abstract; column 5, lines 34-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out an exposure of a detectable substance to a nanocrystal in Chee et al in a gas phase since Chee et al do not limit the exposure to a particular phase and Vossmeyer teaches that adsorption of an analyte (a detectable substance) to a nanoparticle of 20 nm or less (See column 3, lines 36-40) may be carried out in a liquid or gas-phase.

13. Claims 1-3, 5, 6, 8, 10, 11, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barbera-Guillem et al (US 6,2617,79) in view of Dimitrov or Vossmeyer.

Barbera-Guillem et al are applied here for the same reasons as set forth in paragraph 6 of the Office Action mailed on 2/09/2006. Barbera-Guillem et al do not expressly teach that an exposure of the detectable substance to the nanocrystal is carried out in a solid or gas phase (Claims 1, 21).

Dimitrov teaches that an analyte (a detectable substance) can be attached to a nanoparticle, e.g. quantum dot, in a <u>solution</u> or <u>solid-phase</u>, including, for example, to a solid surface such as a chip, microarray or bead (See P13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out an exposure of a detectable substance to a nanocrystal in Barbera-Guillem et al in a solid phase since Barbera-Guillem et al do not limit the exposure to a particular

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phase and Dimitrov teaches that an analyte (a detectable substance) can be attached to a nanoparticle, e.g. quantum dot, in a solution or solid-phase.

Vossmeyer teaches that adsorption of an analyte (a detectable substance) to a nanoparticle of 20 nm or less (See column 3, lines 36-40) may be carried out in a <u>liquid</u> or <u>gasphase</u> (See Abstract; column 5, lines 34-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out an exposure of a detectable substance to a nanocrystal in Barbera-Guillem et al in a gas phase since Barbera-Guillem et al do not limit the exposure to a particular phase and Vossmeyer teaches that adsorption of an analyte (a detectable substance) to a nanoparticle of 20 nm or less (See column 3, lines 36-40) may be carried out in a liquid or gasphase.

14. Claims 2, 21, 25, 26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitrov in view of Weiss et al or Daniels et al or Chee et al or Barbera-Guillem et al.

Dimitrov are applied here for the same reasons as above. Dimitrov fails to teach that radiation comprises UV (Claims 2, 21); detecting and analyzing an altered photoluminescence properties comprises utilizing a wavelength selective detector (Claims 25 and 26).

As to claims 2 and 21, Weiss et al/Daniels et al/Chee et al/Barbera-Guillem et al teach that UV can be used for as a radiation source for nanocrystals (See above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used UV as a radiation source for nanocrystals in Dimitrov Weiss et al/Daniels et al/ Chee et al/Barbera-Guillem et al teach that UV can be used for as a radiation source for nanocrystals.

As to claims 25 and 26, Weiss et al teach that the organo luminescent semiconductor is capable of exhibiting a detectable change in adsorption (See column 2, lines 24-25), i.e. the organo luminescent semiconductor of Weiss is capable of detecting altered photoluminescence properties of the nanoparticles comprising the chemical adsorbate as a result of the chemical species being adsorbed onto the surface of the nanoparticles. The presence of the detectable substance in the material is then determined either by **measuring** the absorption of energy by the organo luminescent semiconductor nanocrystal probe and/or detecting the emission of radiation of a narrow wavelength band by the organo luminescent semiconductor nanocrystal probe and/or detecting the scattering or diffraction by the organo luminescent semiconductor nanocrystal probe, indicative (in either case) of the presence of the organo luminescent semiconductor nanocrystal probe bonded to the detectable substance in the material (See column 3, lines 19-29) obviously utilizing a wavelength selective detector.

15. Claims 4, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitrov in view of Weiss et al.

Dimitrov are applied here for the same reasons as above. Dimitrov fails to teach that silicon nanoparticles are used instead of <u>CdSe</u> nanoparticles.

Weiss et al teach that either <u>CdSe</u> nanoparticles or silicon nanoparticles can be used for detecting an analyte (See column 5, lines 65; column 6, line 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used silicon nanoparticles in Dimitrov instead of <u>CdSe</u> nanoparticles since Weiss et al teach that either <u>CdSe</u> nanoparticles or silicon nanoparticles can be used for detecting an analyte.

- 16. Claims 6, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitrov/
 Dimitrov in view of Weiss et al/Weiss et al in view of Dimitrov or Vossmeyer/Daniels et al in view of Dimitrov or Vossmeyer, further in view of Chee et al/Barbera-Guillem et al for the reasons of record as set forth in paragraph 9 of the Office Action mailed on 2/09/2006.
- 17. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al in view of Dimitrov or Vossmeyer/Daniels et al in view of Dimitrov or Vossmeyer/Chee et al in view of Dimitrov or Vossmeyer/Barbera-Guillem et al in view of Dimitrov or Vossmeyer, further in view of Harris et al (US 20040009911) for the reasons of record as set forth in paragraph 10 of the Office Action mailed on 2/09/2006.
- 18. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al in view of Dimitrov or Vossmeyer/Daniels et al in view of Dimitrov or Vossmeyer/Chee et al in view of Dimitrov or Vossmeyer/Barbera-Guillem et al in view of Dimitrov or Vossmeyer, further in view of West et al (US 6,530,944) for the reasons of record as set forth in paragraph 11 of the Office Action mailed on 2/09/2006.
- 19. Claims 12, 13, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al in view of Dimitrov or Vossmeyer/Chee et al in view of Dimitrov or Vossmeyer/Barbera-Guillem et al in view of Dimitrov or Vossmeyer, further in view of Daniels et al for the reasons of record as set forth in paragraph 12 of the Office Action mailed on 2/09/2006.
- 20. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weiss et al in view of Dimitrov or Vossmeyer/Daniels et al in view of Dimitrov or Vossmeyer/Chee et al in view of Dimitrov or Vossmeyer/Barbera-Guillem et al in view of Dimitrov or Vossmeyer,

further in view of Ravkin et al (US 6,908,737) for the reasons of record as set forth in paragraph 13 of the Office Action mailed on 2/09/2006.

- 21. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitrov/
 Dimitrov in view of Weiss et al/Weiss et al in view of Dimitrov or Vossmeyer/Daniels et al in view of Dimitrov or Vossmeyer, further in view of Harris et al for the reasons of record as set forth in paragraph 14 of the Office Action mailed on 2/09/2006.
- 22. Claims 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitrov in view of Weiss et al/Weiss et al in view of Dimitrov or Vossmeyer, further in view of Daniels et al for the reasons of record as set forth in paragraph 15 of the Office Action mailed on 2/09/2006.
- 23. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitrov/
 Dimitrov in view of Weiss et al/Weiss et al/Daniels et al in view of Ravkin et al for the reasons of record as set forth in paragraph 16 of the Office Action mailed on 2/09/2006 for the same reasons as discussed above.
- 24. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitrov/
 Dimitrov in view of Weiss et al/Weiss et al in view of Dimitrov or Vossmeyer/Daniels et al in view of Dimitrov or Vossmeyer, further in view of West et al for the reasons of record as set forth in paragraph 17 of the Office Action mailed on 2/09/2006.
- 25. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitrov/
 Dimitrov in view of Weiss et al/Weiss et al in view of Dimitrov or Vossmeyer/Daniels et al in view of Dimitrov or Vossmeyer, further in view of Chee et al for the reasons of record as set forth in paragraph 18 of the Office Action mailed on 2/09/2006.

Response to Arguments

26. Applicant's arguments with respect to claims 1-15, and 21-30 have been considered but are most in view of the new ground(s) of rejection.

Conclusion

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy Primary Examiner Art Unit 1762 PRIMARY EXAMINED

May 4, 2006